Oersted and the Discovery of Electromagnetism. By Bern Dibner. Norwalk, Conn.: Burndy Library, 1961. Pp. 47. $3.

Bern Dibner, industrialist and scholar, has written another in his series of monographs primarily concerned with electrical science and technology. As those familiar with Dr. Dibner's works have come to expect, this volume is handsomely done. There is a profusion of wisely chosen illustrations from contemporary sources and a reproduction of Oersted's four-page Latin tract, *Experimenta circa effectum conflictus electrici in acum magneticam*, announcing his great discovery on July 21, 1820 (a copy of this rare tract is in the Burndy Library maintained by Dibner).

Relying upon contemporary sources, Dibner has written a narrative fixing Oersted's discovery as the second in three epoch-making steps in the history of electrical science: Volta's pile; Oersted's electromagnetism; and Faraday's magneto electricity. Dibner does not, however, fail to note that it was André Marie Ampère who moved on from Oersted's discovery of the influence of an electric current upon a magnetic needle to establish that an electric current generated magnetism.

Having discussed the circumstances surrounding Oersted's discovery (some of which are yet not clear), Dibner then describes the effects of the discovery upon science and technology. In science, Faraday and others were stimulated by the assumptions of *Naturphilosophie* current at the time, and evidenced by the Romantic influence on science, to

search for the converse of electromagnetism—electricity from magnetism. Dibner devotes a section to Faraday's revelation of electromagnetic induction in 1831.

As Dibner notes, the repercussions of applying electromagnetism—or using science as a technique—were highly significant. Earlier trials with current telegraphs had depended upon electrolysis for the signal; now the movement of the needle would serve far better. Furthermore, the Halle chemist, J. S. C. Schweigger, shortly after learning of electromagnetism made his multiplier, or galvonometer, which could be used to give a stronger movement with a weak signal. Dibner outlines subsequent inventions culminating in the commercial telegraph of mid-century.

Even though Dibner does point up the significance of Oersted's discovery by integrating it within the context of the early history of electrical science and technology, he fails to emphasize further the importance of the discovery for technology by calling attention to the fact that both the telegraph and the electric motor were constructed on the basis of the work of Volta and Oersted. So much emphasis has been placed upon Faraday's discovery of induced electricity as the scientific prelude to electrical technology that counter emphasis is in order.

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